

Work Order ID 158251

Thursday, March 16, 2017 11:26:46 AM

U/R

158251

Page 1

Item ID: D3594-043 Accept *N900040100* Setup Start *NS1*

Revision ID: URF 16-673 Stop *NS2*

Item Name: Floor Doubler Assembly, LH

Start Date: 3/19/2017 Start Qty: 4.00 *4*

Required Date: 3/22/2017 Req'd Qty: 4.00 *4*

Reference: SCHEDULED/S

Cust Item ID:

Customer:

Approvals: Process Plan: DAS Date: MAR 16 2017 Tooling: _____ Date: _____ Run Start *NR1*

QC: 21 Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3594	C U/R <u>OK 4/17/3/16</u>								
100	FLOW WATER JET	0.00							
100									
Waterjet	Memo	0.21							
FLOW CNC Waterjet	1-Cut as per Dwg D3594								
	Dwg Rev: <u>C</u>								
	Prog Rev: <u>C</u>								
	2-Deburr if necessary								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110									
QC	Memo	0.04							
Quality Control									

DAS

46

9-89

17/03/18

DAS

46

9-89

17/03/18

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____																																																									
Description Work Order Deviation				Disposition																																																													
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

Thursday, March 16, 2017 11:26:46 AM

Page 2

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Setup  Start  *NS1*
          Stop   *NS2*

```

Cust Item ID:
Customer:

Run	Start	*NR1*
	Stop	*NR2*

[illegible]

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
		OTHER : ☐							

Work Order ID 158251

158251

Page 3

Thursday, March 16, 2017 11:26:46 AM

Item ID: D3594-043 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: URF 16-673 Stop ***NS2***
 Item Name: Floor Doubler Assembly, LH
 Start Date: 3/19/2017 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 3/22/2017 Req'd Qty: 4.00 ***4*** Customer:
 Reference: SCHEDULED/S

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	Chemical Conversion Coat per QSI005 4.1	0.00							
150	HandFinish	0.44				(x4)			207/03/22 BEB
	Hand Finishing								
160	QC7-Inspect Chemical Conversion Coat	0.00							
160	QC	0.04				4			DAS 38 9-88 MAR 23 2017
	Quality Control								
170	Small Fab	0.00							
170	Small Fab	0.16				4X			DAS 36 9-88 17/03/30
	Small Fab								
	Install Nut Plates As per Dwg D3594								

DQA: _____

Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: MAY 09 2017

Date: _____

Work Order update only ☐

Work Order: <u>158251</u> Part No. <u>D3594 043</u> NCR No. <u>17-6401</u>	DISPOSITION Rework ☒ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☒ Quality ☐ Other ☐			
Date: <u>17/3/16</u>	Step #: <u>170</u>	QTY Effective: <u>(1)</u>		MRB (QSI042) Approval DAS 12 9-89 <u>17/3/16</u>	
Description Work Order Deviation		Disposition		Completed By	
<u>Typo on dwg.</u>		<u>Use MS21069LS Nuts/plts</u> <u>instead of MS21069L3</u> <u>PAR 16-557</u> <u>LS or -S nuts/plts</u>		<u>17/3/16</u> <u>Lead hand / Supervisor</u> <u>Approval Verification</u> <u>DAS</u> <u>9-89</u> <u>17-04-04</u>	
		<u>QC / QA Coordinator</u> <u>Approval</u> <u>DAS</u> <u>9-89</u> <u>17-04-04</u>			

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification ☐		☐	Pressure/Forced	☐	Temperature/Cure
Design ☐	☐	Operator ☐		☐	Bending	☐	Set-up
Doc/Data ☒	☐	Offset/Setup ☐		☐	Centre Not Concentric	☐	BOM/Route
Equip/Tooling ☐	☐	Supplier ☐		☐	Cracks	☐	Broken/Damage/Defect
Handling/Pre ☐	☐	Training ☐		☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified
Material ☐	☐	Use for Testing ☐		☐	Cuffs	☐	Contamination
Internal Transport ☐	☐	Poor Information ☐		☐	Crushing	☐	Countersink
Tribal Knowledge ☐	☐	Rushing ☐		☐	Heat Treat	☐	Cut Too Short
LOA ☐	☐	Product Improvement ☐		☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear
Substation ☐	☐	Process Improvement ☐		☐	Marks/Chatter	☐	Drill Holes
Past Expiry Date ☐	☐	Manufacturing Process ☐		☐ OTHER :			
Misidentified ☐	☐	Past Due ☐					

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By																																																									
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Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : ☐			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

Thursday, March 16, 2017 11:26:49 AM

Page 1

Work Order ID: 158251

158251

Parent Item: D3594-043

D3594-043

Parent Item Name: Floor Doubler Assembly, LH

Start Date: 3/19/2017

Required Date: 3/22/2017

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev :A New Issue 07-01-22 EC
16.07.28 DWG REV.C DD VERF:JLM

IPP REV:B

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6S.080		Purchased	No			100	sf	113.1500	0.51	2.147368			
M6061T6S 080									**			DAS 46 9-89	17/03/18
6061-T6 .080 Sheet													

Location

Loc Qty

Loc Code

MAT020

113.15

m135861

10.5

m136342

91.55

m136632

11.1

MS21069L3

Purchased

No

140

Each

130.0000

1

4

MS21069L3

ANCHOR NUT

MS21069L3 MS21069-5

DAS
12
9-89

17/3/16

Location

Loc Qty

Loc Code

ST299

130

m136740

50

m136986

80

MS20426AD4-4

Purchased

No

170

Each

3,050.000

2

8

MS20426AD4-4

Rivet

Location

Loc Qty

Loc Code

GA

1331

125445

1331

ST312

1719

m132536

1719

DAS
36
9-89

17/03/30

M137167 (1x)

M131920 (3x)

DAS
36
9-89

17/03/30

8

DQA: _____ Date: _____



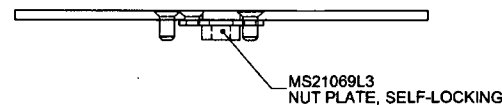
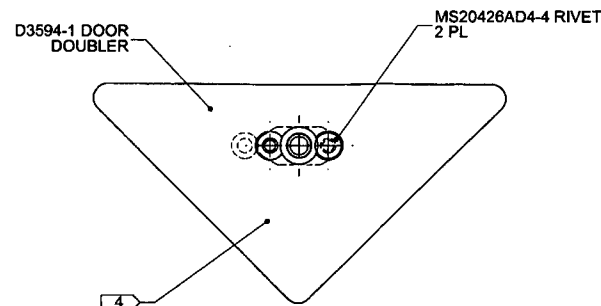
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	
		☐ OTHER : _____							

ITEM	QTY	P/N	DESCRIPTION
	X	D3594-041	DOUBLER ASSEMBLY
1	1	D3594-1	DOUBLER
2	1	MS21069L3	NUT PLATE, SELF-LOCKING
3	2	MS20426AD4-4	RIVET, SOLID, CSK



D3594-041 DOOR DOUBLER ASSEMBLY

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 158257 MJS

17-03-16

UNDER REVIEW

URF16-673 CP

16-11-16

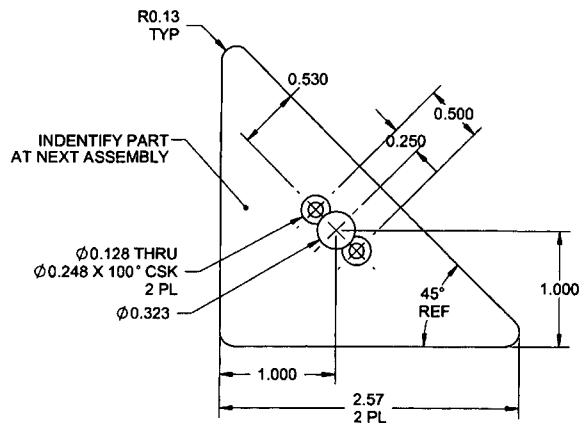
RELEASED
2016-07-26
ECN 16-531

APPROVED

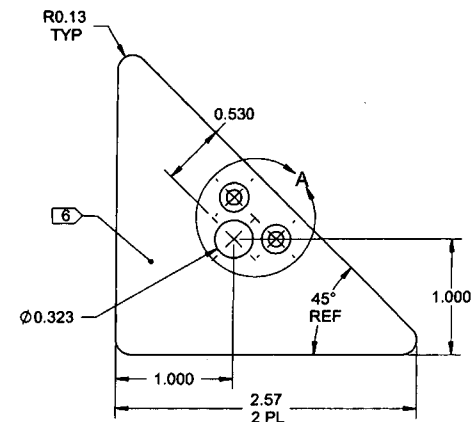
C	REFORMAT TO CURRENT STANDARDS. ADD 0.5" OF MATERIAL TO -3 & -4 REASON PAR16-501.	AJS	16.05.25
B	REFORMAT TO B SIZE DRAWING. SHEET 2 ADD -5.	AJS	08.05.14
A	NEW ISSUE	MB	07.04.13
REV.	DESCRIPTION	BY	DATE
DESIGN	MB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED	MB	DRAWING NO.	REV. C
MFG. APPR.	DD	D3594	SHEET 1 OF 4
APPROVED	WM	TITLE	SCALE
DE APPR.	DS	DOUBLER	NTS
DATE	16.05.25	COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

NOTES:

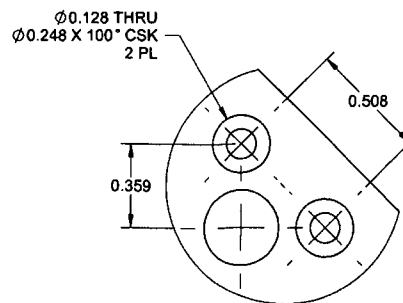
- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY PER DART QSI 044
- 7) WEIGHT: 0.04 lbs



D3594-1 DOOR DOUBLER



D3594-5 DOOR DOUBLER



DETAIL A
SCALE 2X

UNDER REVIEW

URF16-673 CP
16-11-16

- *NOTES:**
- 1) MATERIAL: 6061-T6 (OR 6061-T62) ALUMINUM SHEET, 0.080 THICK, PER AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 REF. DART SPEC. M6061T6S.080
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION -5 ONLY: IDENTIFY PER DART QSI 044
 - 7) WEIGHT -1/-5: 0.03 lbs

RELEASED
2016-07-26

APPROVED

DESIGN	MB	DART AEROSPACE LTD	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	MB	DRAWING NO.	REV. C
MFG. APPR.	DD	D3594	SHEET 2 OF 4
APPROVED	WM	TITLE	SCALE
DE APPR.	DS	DOUBLER	NTS
DATE	16.05.25	COPYRIGHT © 2007 BY DART AEROSPACE LTD	
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ITEM	QTY -043	P/N	DESCRIPTION
	X	D3594-043	FLOOR DOUBLER ASSEMBLY
1	1	D3594-3	DOOR DOUBLER ASSEMBLY
2	2	MS20426AD4-4	RIVET, SOLID, CSK
3	1	MS21069L3	NUT PLATE, SELF-LOCKING

ITEM	QTY -044	P/N	DESCRIPTION
	X	D3594-044	FLOOR DOUBLER ASSEMBLY
1	1	D3594-4	DOOR DOUBLER ASSEMBLY
2	2	MS20426AD4-4	RIVET, SOLID, CSK
3	1	MS21069L3	NUT PLATE, SELF-LOCKING

MS21069L3 4/17/16

MS20426AD4-4
RIVET
2 PL

MS21069L3
NUT PLATE, SELF-LOCKING

D3594-3
FLOOR DOUBLER

D3594-043 FLOOR DOUBLER ASSEMBLY

MS21069L3
NUT PLATE, SELF-LOCKING

D3594-4
FLOOR DOUBLER

D3594-044 FLOOR DOUBLER ASSEMBLY

MS20426AD4-4
RIVET
2 PL

UNDER REVIEW

URF16-673 CP

16-11-16

NOTES:

- 1) MATERIAL: NONE
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY PER DART QSI 044
- 7) WEIGHT: 0.82 lbs

RELEASED
2016-07-26

APPROVED

DESIGN	MB	DART AEROSPACE LTD	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	MB	DRAWING NO.	REV. C
MFG. APPR.	DD	D3594	SHEET 3 OF 4
APPROVED	WM	TITLE	SCALE
DE APPR.	DS	DOUBLER	NTS
DATE	16.05.25	COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

